

LOWER ST. CROIX NATIONAL WILD AND SCENIC RIVER ORDINARY HIGH WATER MARK



Ordinary High-Water Mark

- “By **ordinary high-water mark** is meant the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic.
 - *Diana Shooting Club v. Husting* (1914)

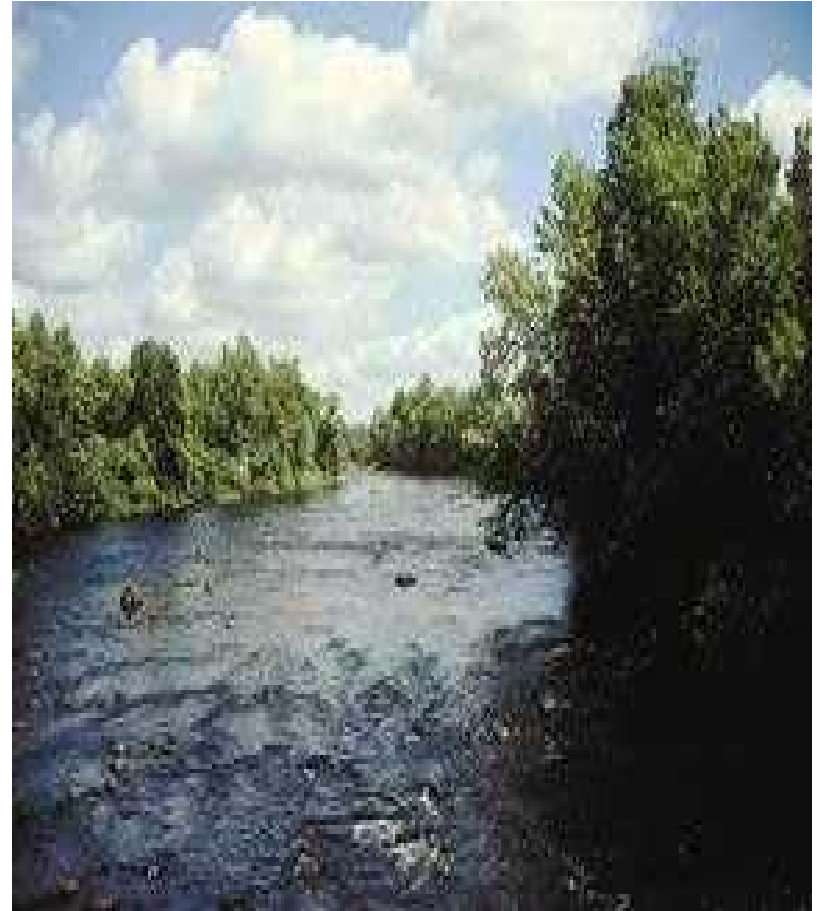
Ordinary High-Water Mark

- ... And where the bank or shore at any particular place is of such a character that it is impossible or difficult to ascertain where the point of ordinary high-water mark is, recourse may be had to other places on the bank or shore of the same stream or lake to determine whether a given stage of water is above or below the ordinary high-water mark.”

The Ordinary High Water Mark

The ordinary high water mark is defined the same for streams as for lakes.

Muench v. PSC, 1952



Identifying the OHWM

- Biological Indicators
 - * multiple trunks on woody vegetation
 - * buttressing of tree trunks
 - * adventitious roots
 - * change in vegetation from aquatic to terrestrial
 - * shallow root systems



TWIN SPRINGS

TRANSECT 1

The biological indicators we found here were one pipe elbow root and multiple tree trunks on several trees

Identifying the OHWM

- Physical Indicators
 - exposed tree roots
 - erosion from waves creating a washmark
 - mud stain or debris line
 - water stains on rocks/culverts/seawalls
 - leachate marks in the soil



TWIN SPRINGS---TRANSECT 2

The erosion line and exposed tree roots are both examples of physical indicators that we look for to find the OHWM.



LAKE MALLALIEU DAM

The water stain on the dam is an excellent physical indicator.



OHWM - biological and physical

SOME
INDICATORS WE
FOUND ON THE
ST CROIX:

Multiple tree
trunks

Exposed roots

Shallow roots

Cobble drift line

Hydric vegetation





UNION PACIFIC RAILROAD PROPERTY

Notice the multiple tree trunks, shallow root systems and water dependent vegetation-all good biological indicators.



The exposed tree roots and cobble drift lines are good physical indicators.



BOB ROLLE'S PROPERTY---TRANSECT 1

Notice the water stain—Gary Lepak is standing at the top of the light stain and Bob Rolle is standing at the bottom of the light stain—excellent physical indicator

Identifying the OHWM Physical indicators

- Permanence
- Predominance

To find the OHWM, we focused on which indicators which were well established and most pronounced to find an accurate elevation.

This is what we found.....



BARGE DOLPHINS AT THE KING POWER PLANT

The stain line on the dolphins is a good example of both permanent and predominate.

As the indicator is a line, it is accurate as well



KINNICKINNIC PARK PIER AREA

The water stain is shown on both the artificial riprap and on the natural riprap---notice that this is not a break in the stain



THE STILLWATER EARTHEN CAUSEWAY

Same staining pattern—



Elevation of stain is
within 0.1 foot as stated
in Ch. 40 of the
guidebook

Identifying the OHWM Corroborating Data

- Water level records
- Rainfall records
- Time series photography

Why These Sites?

- Equally spaced in the reach of river that we did our field work
- Provided a good sampling of the different types of shoreline in the lower 25 miles of river
- Minimal trespass or access concerns
- Convenient—minimal intrusion onto private lands
- Two sites were requested

The Department did receive other requests for field work, but logistically, we could not conduct the needed field work and meet the August 31 public hearing deadline.

GIVEN THAT...

Water levels of the St Croix have been documented to be at generally 681 for 30 days over a 20-year record, the presence, the variety of indicator types, and the consistency of the various indicator types, both biological and physical, begin at low control pool of 675 and end in a general range of 681-682, the permanence and predominance of the water stains found spanning most of the river in the “state zone,” and the guidebook states that the OHWM is not at the edge of open water adjacent to aquatic vegetation, but on the bank or shore where terrestrial vegetation either begins or is destroyed; staff offers elevation 681.5, 1912 Adjustment, Corps datum as the ordinary high water mark of the St Croix in the lower 25 miles known as the “state zone.”

THANK YOU!

Since this project began, we have asked for your ongoing participation and input.

We appreciate all of you taking time out of your busy schedules to attend our previous informational meetings, attend this meeting, and all of your work.